

from a caterpillar into a butterfly. By instinct, animals and plants increase in size, and shape their organs, until they attain maturity. They are not conscious of the force within them : nor are we conscious of the vital processes upon which our lives, from hour to hour, depend. Directive instinct needs no assistance from experience or practice : the young chaffinch knows precisely the materials for its first nest, and the method of inter-weaving them : young birds generally know how to fly without the need of practice : the bee is an instinctive architect of hexagonal cells. By instinct our organs perform their functions—the heart beats, the lungs pulsate, the liver and kidneys distil their secretions. The direction of these complicated processes owes nothing to experience, and in this differs essentially from the working of reason. But reason itself is a development of processes that are fundamentally instinctive, and are shared by man with the animals below him. So also, we shall find, are impulses which we do not ordinarily think of as instinctive : such as the promptings of kindness, and even the vague feelings of ecstasy which we speak of as "aesthetic." Instinct underlies our emotions. We love, are enraged, are terrified. feel pity, as we are moved by impulses which lie as deep as life itself. Our instincts may be compared to a number of alarms, each of which is set for a special stimulus and runs

down immediately upon being touched by it. The stimulus may be a sensation of something that occurs outside us or inside us: it may be a recollection, or it may merely be the lapse of a period of time. Once stimulated, instinct acts forthwith, unless it is checked or inhibited, by another instinct, by habit, or by an effort of will.

The diversity which we perceive in the behaviour